

2010

# MATERIAL SAFETY DATA SHEET (MSDS)

AIR

### (Please ensure that this MSDS is received by the appropriate person)

DATE: January 2018 Ref.No. MS104	version2
1 PRODUCT AND COM	MPANY IDENTIFICATION
PRODUCT IDENTIFIC	ATION
Product Name	AIR
Chemical Formula	21% Oxygen/ Balance Nitrogen
Trade Names	Air, Compressed.
	Dry Air
	Air, Instrument Grade
	Air, Instrument Grade, (Zero)
	Air Compressed & Dry
	Medical Air, Compressed
Colour Coding	French Grey (H.30) body
8	Air Instrument grade
	French Grev (H.30) body with the
	"Instrument Grade" logo affixed to
	the body of the cylinder
	Air. Instrument grade, (ZERO).
	Protea Pink (P.58) body with the
	"Instrument Grade" logo and
	"ZERO" decal affixed to the body
	of the cylinder.
	Medical Air. Compressed
	French Grev (H 30) body with
	white & black quadrants on the
	shoulder of the cylinder
Valve	All of the above grades have the 3
	SO - Brass 5/8 inch right hand
	female valve fitted
Company Identification	African Oxygen Malawi Limited
<b>r</b> , , , , , , , , , , , , , , , , , , ,	Johnstone Road Ginnery
	Corner. Blantyre
	Tel. No: $+265(1)$ 871 611
	Fax. No: +265(1) 871 260
EMERGENCY	
NUMBER	+265 (1) 871 260 (24hrs)

#### NGREDIENTS 1 . . . . .

Chemical Name	Air
Synonyms	Atmospheric Air
CAS No.	None
UN No.	1002
ERG No.	122
Hazard Warning	2C Non flammable gas

### **3 HAZARDS IDENTIFICATION**

- Main Hazards. All cylinders are portable gas containers and must be regarded as pressure vessels at all times. Air is non -flammable, but readily supports combustion. Never permit oil, grease, or other readily combustible substance to come into contact with air at high pressures.
- Adverse health effects. None. Air is non-toxic and nonflammable. Of the constituents which make up air, only oxygen and nitrogen are necessary for life.
- Chemical Hazards. In air which contains more than the normal 21% oxygen, combustible materials are easier to ignite and burn faster. The higher the concentration of oxygen, the greater the fire risk. In a compartment (such as a tunnel, caisson or chamber) filled with air under pressure, most combustible materials will ignite more readily and burn much more rapidly than they would in air at normal atmospheric pressure, because of the increase in partial pressure of oxygen, even though the air contains only the normal 21% of oxygen.

### **4 FIRST AID MEASURES**

Care should be taken with the exposure to either oxygendeficient, or oxygen-enriched atmospheres. Conscious persons should be assisted to an uncontaminated area and inhale fresh air. They should be kept warm and quiet. Quick removal from the contaminated area is most important. The physician should be informed when a patient has experienced hyperoxia.

Eye Contact	No known effect
Skin Contact	No known effect
Ingestion	No known effect

### **5** FIRE FIGHTING MEASURES

- Extinguishing media. As Air is non-flammable, but supports combustion, the correct type of extinguishant should be used depending on the combustible material involved.
- Specific Hazards. Materials that would not normally burn in air could combust vigorously in atmospheres having high concentrations of oxygen.
- Emergency Actions. All cylinders should be removed from the vicinity of the fire. Cylinders that cannot be removed should be cooled with water from a safe distance. Cylinders which have been exposed to excessive heat should be clearly identified and returned to the supplier. CONTACT THE NEAREST AFROX BRANCH.
- Protective Clothing. Safety goggles, gloves and safety shoes should be worn when handling cylinders.

#### Environmental precautions. None

#### 6 ACCIDENTAL RELEASE MEASURES

- Personal Precautions. Avoid exposure to either oxygen deficient, or oxygen-enriched atmospheres.
- Environmental precautions. Beware of oxygen enriched atmospheres coming into contact with readily combustible materials. No known effect. Small spills Large spills No known effect.

#### 7 HANDLING AND STORAGE

Do not allow cylinders to slide or come into contact with sharp edges. Cylinders of air should not be stored near cylinders of acetylene or other combustible gases. Air cylinders may be stacked horizontally provided that they are firmly secured at each end to prevent rolling. Prevent dirt, grit of any sort, oil, or any other lubricant from entering the cylinder valves, and store cylinders well clear of any corrosive influence e.g. battery acid. Compliance with all relevant legislation is essential. Use a "first in - first out" inventory system to prevent full cylinders from being stored for excessive periods of time. Keep out of reach of children.



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#### 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

**Occupational exposure hazards.** Avoid exposure to oxygenenriched atmospheres, as this could result in clothing becoming saturated by oxygen -enriched air. On ignition the clothing could burn fiercely resulting in serious burns.

### Engineering control measures. No known effect.

**Personal protection.** Safety goggles, gloves and shoes, or boots, should be worn when handling cylinders.

Skin No known effect.

9 PHYSICAL AND CHEMICAL PROPERTIES		
PHYSICAL DATA		
Chemical Symbol	None	
Molecular Weight	28,95	
Density, gas @ 101,325 kPa and 20°C	1,205 kg/m <sup>3</sup>	
Colour	None	
Taste	None	
Odour	None	

### **10 STABILITY AND REACTIVITY**

**Conditions to avoid.** Never use cylinders as rollers or supports, or for any other purpose than the storing of air. Never expose cylinders to excessive heat, as this may cause sufficient build-up of pressure to rupture the cylinders.

**Incompatible.** Since dry air is non- corrosive, most materials of construction are suitable.

Hazardous Decomposition Products. None

## 11 TOXICOLOGICAL INFORMATION

Acute Toxicity	No known effect	
Skin & eye contact	No known effect	
Chronic Toxicity	No known effect	
Carcinogenicity	No known effect	
Mutagenicity	No known effect	
Reproductive Hazards	No known effect	
(For further information see Section 3. Adverse Health		
Effects).		

### 12 ECOLOGICAL INFORMATION

No harmful effect.

### **13 DISPOSAL CONSIDERATIONS**

**Disposal Methods.** Small amounts may be blown to the atmosphere under controlled conditions.

**Disposal of packaging.** The disposal of cylinders must only be handled by the gas supplier.

### 14 TRANSPORT INFORMATION ROAD TRANSPORTATION

UN No.	1002		
ERG No.	122		
Hazchem warning	2C Non-flammable gas		
SEA TRANSPORTATION			
IMDG	1002		
Class			
Packaging group			
Label	Non-flammable gas		
AIR TRANSPORTATION			
ICAO/IATA Code	1002		
Class	2.2		
Packaging group			
Packaging instructions			
- Cargo	200		
- Passenger	200		
Maximum quantity allowed			
- Cargo	150 kg		
- Passenger	75 kg		

# **15 REGULATORY INFORMATION**

EEC Hazard class: Non-flammable National legislation: OHSact and Regulations 85 of 1993 Reference SANS 10234 and its supplement.

#### **16 OTHER INFORMATION**

Bibliography

Compressed Gas Association, Arlington, Virginia Handbook of Compressed Gases - 3rd Edition Matheson. Matheson Gas Data Book - 6th Edition

### EXCLUSION OF LIABILITY

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